

WHAT IS CLAIMED IS:

1. A weight detecting apparatus for detecting a weight of an object comprising:

weight detecting means having a fixed end kept in a fixed state, and  
5 having a free end bearing a weight of the object;

first vibration detecting means arranged on a fixed end side of said  
weight detecting means for detecting a vibration component;

second vibration detecting means arranged on a free end side of said  
weight detecting means for detecting a vibration component; and

10 weight calculating means for calculating the weight of the object based on  
the detection signals provided from said weight detecting means and said first  
and second vibration detecting means, by removing the vibration components  
from the detection signal provided from said weight detecting means.

15 2. The weight detecting apparatus according to claim 1, wherein  
said weight calculating means calculates the vibration component on the  
free end side of said weight detecting means based on the detection signals  
provided from said first and second vibration detecting means.

20 3. The weight detecting apparatus according to claim 1 or 2,  
wherein

said weight calculating means calculates the weight of the object by  
performing arithmetic processing for correction on the detection signals provided  
from said weight detecting means, said first vibration detecting means and said  
25 second vibration detecting means, and thereby removing the vibration component  
on said fixed end side and the vibration component on said free end side from the  
detection signal of said weight detecting means.

4. The weight detecting apparatus according to claim 1, 2 or 3,

wherein

said weight calculating means has:

A/D converters receiving the detection signals provided from said weight detecting means, said first vibration detecting means and said second vibration

5 detecting means respectively,

an arithmetic circuit receiving an output signal of said A/D converters,

and

a low-pass filter receiving an output signal of said arithmetic circuit.

10 5. The weight detecting apparatus according to claim 1, 2 or 3,

wherein

said weight calculating means has:

A/D converters receiving the detection signals provided from said weight detecting means, said first vibration detecting means and said second vibration

15 detecting means respectively,

low-pass filters receiving an output signal of said A/D converters,

and

an arithmetic circuit receiving an output signal of said low-pass filters.